

REMARKS

The Final Office Action dated April 6, 2004 and the Advisory Action dated June 14, 2004 have been reviewed carefully, and the Application has been amended in a sincere effort to place the claims in condition for allowance. A Request for Continued Examination is being filed herewith.

Though Applicant cited numerous passages from the Specification that provide foundation and support for the claim recitation that the openings in the inventive metallic diffusion layers are of a size so as to limit mass transport of an associated fuel substance therethrough, the Examiner has indicated that the word “limit” itself is not supported. The Examiner states instead that “In [the] summary of the invention, it is stated that: In this embodiment, the layer component acts to both DIFFUSE the chemical substances to and from the reactive sites to the PCM and to CONTROL (i.e., regulate) the overall flow of reactants and byproducts of the reaction.” (Advisory Action, Continuation Sheet, 6/14/04). (Emphasis Added).

Thus, the Examiner has indicated that the language “to regulate” the overall flow of the substances to the PCM is supported by the disclosure. Accordingly, Applicant has amended independent claim 24 and claim 44 to recite: “said openings being of a size so as to regulate mass transport of an associated fuel substance to said anode face....” (Claim 24), and “to regulate the transport of oxygen to said cathode face....” (Claim 44).

It is noted that in the dictionary cited by the Examiner, i.e., Merriam Webster’s Collegiate Dictionary, 10th Edition, the definition of “regulate” is, in relevant part, “3: to

fix or adjust the time, amount, degree, or rate of....” Accordingly, in the present invention, the claimed metallic diffusion layer operates to fix the rate of flow of fuel to the anode face of the PCM, and on the cathode side, the diffusion layer operates to fix the rate of flow of oxygen to the cathode face of the PCM.

The further claim language that the openings “allow mass transport of carbon dioxide produced in said reactions away from the membrane electrode assembly” is supported by the passage in the Specification that indicates that the component also acts “to allow unreacted methanol, carbon dioxide and other byproducts (on the anode side) to travel away from the anode face of the PCM....” (Specification, page 7, lines 25-27).

In summary, it is respectfully submitted that the amendments that recite that the component acts to regulate the transport of reactants and the previous amendments that the component acts to allow the mass transport of carbon dioxide away from the membrane electrode assembly are fully supported by the disclosure, and Applicant therefore respectfully requests reconsideration of the rejection under 35 U.S.C. § 112.

Applicant notes that claims 25 – 62 depend directly or indirectly on claims 24 and/or claim 44 and are also therefore now in condition for allowance.


Applicant respectfully acknowledges the withdrawal of other claim rejections.

There are no remaining objections or rejections and the Applicant thus respectfully submits that the application is now in condition for allowance. Please do not hesitate to contact the undersigned in order to advance the prosecution of this application in any respect.

Please charge any additional fee occasioned by this paper to our Deposit Account

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Respectfully submitted,


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